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Combustion of Atomized Liquid Fuel in a
Turbulent Air Current

S/170/60/003/006/008/011
B013/B067

velocity of flame propagation on the mean distance between the drops of the fuel. It was found that, under the present experimental conditions, the combustion of two-phase mixtures in a turbulent current may correspond to different mechanisms of flame propagation. These mechanisms are mainly determined by the average dimensions of the drops, the mean concentration of the drops per unit volume, the amount of the vapor phase of the fuel, and the turbulent characteristics of the current of the two-phase mixture. The author thanks A. S. Predvoditelev, Corresponding Member of the AS USSR, for valuable advice. There are 3 figures and 1 non-Soviet reference.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo,
g. Moskva (Power Engineering Institute imeni
G. M. Krzhizhanovskiy, Moscow)

Card 2/2

S/081/61/000/023/020/061
B117/B147

AUTHORS: Sundukov, I. N., Chekalin, E. K.

TITLE: Measurement of the mean velocity of sprayed-fuel drops in the flow of a fuel-air mixture

PERIODICAL: Referativny zhurnal. Khimiya, no. 23, 1961, 267, abstract 23169 (Tr. Odessk. un-ta, Ser. fiz. n. v. 150, no. 7, 1960, 55-64

TEXT: Methods of quantitative measurement of the liquid phase in the flow of a two- phase mixture, the measurement of distribution of drops according to size, and the determination of the total surface of drops by the method of light scatter were studied. Results of experiments made with Б-70 (B-70) gasoline are given. [Abstracter's note: Complete translation.] ✓

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S/124/61/000/010/025/056

D251/D301

117350

AUTHORS: Chekalin, E.K. and Sundukov, I.N.

TITLE: Forced ignition of a current of a two-phase fuel-air mixture by an incandescent body

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 10, 1961, 81, abstract 10 B576 (Pr. Odes'k, un-tu. Ser. fiz. n., Tr. Odessk. un-ta, Ser. fiz. n., 1960, 150, no. 7, 66-73)

TEXT: The influence is considered of the parameters of flow of a two-phase mixture on the temperature of ignition by an incandescent body. The investigation was carried out on a special burner which permits variation of the ratio between the liquid and gaseous phases of the fuel, the dimension and velocity of the droplets in the stream. Tests were carried out with the coefficient of air excess equal to 0.56 and the velocity of the current of two-phase mixture equal to 16 m/sec. The igniter had the nature of a

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Forced ignition of a current...

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nichrome cylinder 3 mm in diameter and 15 mm long. It is observed that the temperature of ignition of the mixture depends on the ratio between the liquid and gaseous phases of the fuel and on the dimensions and velocity of the droplets. The corresponding dependence relationships are established. [Abstracter's note: Complete translation]

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CHEKALIN, E. K.

"Experimental Investigation of Turbulent Flams Propagation
Process in a Flow of Pulverized Liquid Fuel."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

ACCESSION NR: AR4015551

S/0081/63/000/024/0088/0088

SOURCE: RZh. Khimiya, Abs. 248603

AUTHOR: Chekalin, E. K.

TITLE: The "step-like" process of turbulent flame propagation in a flow of vaporized liquid fuel

CITED SOURCE: Tr. Odessk. un-ta. Ser. fiz. n., v. 152, no. 8, 1962, 40-42

TOPIC TAGS: liquid fuel, vaporized liquid fuel, liquid fuel combustion, flame propagation, turbulent flame propagation, vaporized fuel combustion

ABSTRACT: The combustion of vaporized fuel is studied on the basis of a "step-like" process, whereby a flame is transmitted from one droplet to an adjacent one without combustion of the mixture in the inter-droplet spaces. Data are cited from a previous study by the author (RZh, Khimiya, 1961, Abs. 24245) which confirm the existence of this process. A. Sokolik

DATE ACQ: 29Jan64

SUB CODE: PR, FL

ENCL: 00

Card 1/1

MAKAROV, YU.V.; MAKSIMOV, A.M.; TRUKHIN, V.I.; CHEKALIN, E.K. (Moscow)

"The shock wave investigation in a magnetohydrodynamic shock tube".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

L 1520/-85 EWT(1)/EWP(m)/EWG(k)/EPA(sp)-2/EPG(v)/EEG(t)/T/EEG(b)-2/FCS(k)/EMA(h)/
EPA(w)-2/EWA(m)-2/EWA(l) Pz-6/Pd-1/Pab-10/Pe-5/Pl-4/Po-4 AEDC(a)/SED(b)/ESD(c)
SSD/AFWL/BSA/ASD(f)-2/ASD(p)-3/AFETR/RAEM(a)/RAEM(c)/ESD(t)/IJP(c) AT/HLK

ACCESSION NR: AT4048008

S/0000/64/000/000/0059/0072

AUTHOR: Chekalin, E. K.; Trukhin, V. I.; Lozinskaya, A. I.

3+1

TITLE: Investigation of the motion of plasma in a gas-discharge tube
equipped with coaxial electrodes

SOURCE: AN SSSR. Energeticheskiy institut. Fizicheskaya gazodi-
namika i svoystva gazov pri vysokih temperaturakh (Physical gas
dynamics and properties of gases at high temperatures), Moscow, Izd-
vo Nauka, 1964, 59-72

TOPIC TAGS: gas discharge tube, plasma flow, magnetohydrodynamics,
plasma luminescence, coaxial accelerator

ABSTRACT: The paper investigates the motion of a plasma inside an
accelerator equipped with coaxial electrodes. The distribution of
the velocities of the luminescent plasma front inside the accelerator
was investigated for a wide range of initial air pressures in the
shock tube. Observations were also made on the discharge of plasma
from the coaxial accelerator into the shock tube and on the reflec-
tion of plasma from the far end of the shock tube. The time varia-

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ACCESSION NR: AT4048008

tion of the pressure pulse at the end of the tube and plasma luminescence were recorded, and the spectral composition of the plasma was investigated. The experimental setup consisted essentially of a vertical glass tube 200 cm in length and 10 cm in diameter. A bank of condensers of 45 μ farad total capacitance could be charged positively up to 100 kV. The total inductance of the busbars and the discharge chamber (coaxial copper electrodes 45 cm in length) was 1 μ henry. The inside diameter of the outer grounded electrode was 9 cm, and the outer diameter of the inner electrode was 2 cm. The potential was applied to the inner electrode using a controlled air gap. Pressure was measured by using a piezoelectric transducer, and the luminescence was recorded by using a photoelectric multiplier. The dependence of the velocity of the luminescent front on the distance along the axis of the coaxial electrodes was obtained; the front velocity was also found to depend strongly on the initial air pressure in the tube and to reach a maximum depending on the air pressure. An analysis of the velocity distribution showed that the velocity reached a maximum at the instant the first half-period of the oscillatory discharge terminates, i.e., when the discharge current changes its

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ACCESSION NR: AT4048008

direction and the voltage, its polarity. After reaching a maximum, the plasma velocity decreases gradually along the remaining length of the coaxial line and also along the total length of the tube, up to its end. Similar measurements were made with a shortened central electrode of the coaxial accelerator. Certain reasons are proposed for the presence of the plasma velocity maximum. Successive frames obtained by high-speed photography show the discharge of plasma from the end of the coaxial accelerator and the reflection of the plasma front from the end of the shock tube. The distribution of the front velocity along the tube and close to its end was calculated from the experimental data as a function of the initial air pressure. In the immediate vicinity of the tube end, the plasma velocity ceases to decrease. Oscillograms of pressure and plasma luminescence showed that the width of the pressure pulses increases from 30 to 63 μ sec as the initial air pressure inside the tube rises from 3.3 to 9.8 mm Hg, and that with increasing initial air pressure, both the mean velocity of the reflected front and the length of the luminescence pulse decrease. A typical spectrum was analyzed to determine the plasma composition; the presence of singly ionized nitrogen ions indicates that the maximum attained temperature is not less than 10^4 K. It is concluded :

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ACCESSION NR: AT4048008

that the maximum temperature occurs somewhere in the gas-discharge plasma and not in the gas compressed by the shock wave. Orig. art. has: 11 figures.

ASSOCIATION: none

SUBMITTED: 06Mar64

ENCL: 00

SUB CODE: ME, EC

NO REF SOV: 002

OTHER: 003

ATD PRESS: 3143

Card 4/4

L 00821-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) AT/JD/JG/GD

ACC NR: AT6022651

SOURCE CODE: UR/0000/66/000/000/0101/0108

AUTHOR: Chekalin, E. K.; Shumakov, V. S.

ORG: none

TITLE: Discharge of a metal plasma jet into a vacuum

59
B+1

SOURCE: AN SSSR. Energeticheskii institut. Issledovaniya po fizicheskoy gazodinamike (Studies of physical gas dynamics). Moscow, Izd-vo Nauka, 1966, 101-108

TOPIC TAGS: plasma jet, alkali metal, plasma temperature

ABSTRACT: In order to obtain streams of a metal plasma, use was made of the evaporation of the substance of the electrodes in a pulsed high-current discharge, followed by electrodynamic acceleration of the plasma formed. Analysis of the emission spectrum of the plasma in the visible region by means of an ISP-51 spectrograph showed the presence of the lines of the alkali metal employed, two hydrogen lines (H_α and H_β), and two lines of copper and sodium. Oscillograms of the glow intensity of the various spectral emission lines showed the plasma stream to be made up of individual plasmoids corresponding to the periodic ejections of plasma from the plasma gun. Some time-averaged parameters of the plasma streams of the alkali metal were measured: the concentration of ions n_i was found to be 4.0×10^{14} particles/cm³, and the average temperature of the plasma stream $T_i = (19 \pm 5) \cdot 10^3$ °K. The average pressure in the plasma stream was found to be 1.6 mm Hg. It is shown that the averaging of the plasma parameters

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L 00821-67

ACC NR: AT6022651

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ters over a time interval of 100 μ sec is fully justified: the experimentally determined average values of the plasma parameters should then be close to the true values. The study of the discharge of a metal plasma into a vacuum shows that such plasma jets can be used for investigating processes of heat transfer from the plasma stream to a solid wall and for various aerodynamic studies in plasmas. Orig. art. has: 8 figures and 6 formulas.

SUB CODE: 20/ SUEM DATE: None. / ORIG REF: 002

hs

L 00820-67 EWT(1) IJP(c) AT/GD

ACC NR: AT6022652

SOURCE CODE: UR/0000/66/000/000/0109/0118

AUTHOR: Chekalin, E. K.; Shumanov, V. S.

ORG: none

TITLE: Electric explosion of wire in air and vacuum

SOURCE: AN SSSR. Energeticheskiy institut. Issledovaniya po fizicheskoy gazodina-
mike (Studies of physical gas dynamics). Moscow, Izd-vo Nauka, 1966, 109-118

TOPIC TAGS: moving plasma, exploding wire

ABSTRACT: Experiments on the electric explosion of copper wire in air and vacuum were conducted in order to observe the differences in the explosive processes in these two media, and appreciable differences were noted. Spectroscopic studies of time-resolved plasma radiation were made, and the volt-ampere characteristics of the discharge in the initial stage of the explosion were determined. Experiments were also performed in order to study the process of expansion of the plasma cloud in a vacuum, and some plasma parameters were measured. It was found that the plasma expansion processes are less stable in a vacuum than in air. It is concluded that the explosion of the wire in a vacuum, despite a substantial complexity of the phenomenon as a whole, permits the study of a series of the physical properties of a dense plasma expanding in a vacuum. Orig. art. has: 8 figures and 3 formulas.

SUB CODE: ^{11/13} ~~22~~ SUBM DATE: None/ ORIG REF: 001/ OTH REF: 003
Card 1/1 hs

ACC NR: AT7000295

SOURCE CODE: UR/3142/60/150/007/0065/0073

AUTHOR: Chekalin, E. K.; Sundukov, I. N.

ORG: None

TITLE: Forced ignition of a stream of two-phase fuel-air mixture by an incandescent body

SOURCE: Odessa. Universitet. Trudy, v. 150. Seriya fizicheskikh nauk, no. 7, 1960. Voprosy ispareniya i goreniya v dispersnom vide (Problems of evaporation and combustion in the dispersed state), 65-73

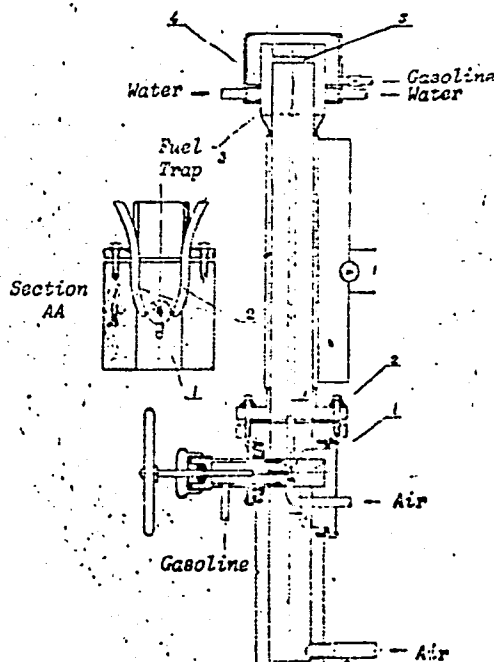
TOPIC TAGS: combustion kinetics, fuel ignition, liquid fuel, flow analysis

ABSTRACT: The authors study the temperature of forced ignition by an incandescent body as a function of various flow parameters of a two-phase mixture. A mixture with controllable parameters was produced by the special precombustion unit shown in the figure. This installation consists of a tube 20 mm in diameter closed at the lower end and made in two sections. The main air introduced at the bottom end perpendicular to the longitudinal axis determines the composition of the fuel-air mixture. This air moves upward washing over cylinder 1 10 mm in diameter and two tubes 2 as shown in section AA. After passing the cylinder, the air stream reaches the upper half of the precombustion unit and leaves the nozzle in the form of a cylindrical jet. Cylinder

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1 is an atomizer controlled by a needle valve. The fuel is atomized by the upper air jet and fed into the main air stream. Above cylinder 1 the fuel is partially mixed with the main air stream and partially settles on the inner walls of the upper half of the tube to form a liquid film which is moved upward by the air stream. The part of the fuel remaining in this film must be taken into account when calculating the composition of the two-phase mixture outside of the precombustion unit. This is done by placing annular slit 5 in the path of the film to connect the inner cavity of the precombustion unit with "fuel trap" 3. The liquid film is caught in this trap and sucked back into the flow in the lower part of the unit. In the case of extremely rich mixtures, a second



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fuel trap 4 made from plexiglass in the form of an annular vessel around the precombustion tube catches the excess fuel which is measured to correct the fuel concentration in the jet. The temperature of forced ignition was measured as a function of the ratio between the liquid and gaseous phases of the fuel, the average size and total area of the drop in a unit of flow and the average velocity of the drops in the stream. The results show that the temperature of forced ignition by an incandescent body in a stream of vaporized complex fuel is chiefly dependent on the velocity and average dimensions of the fuel drops. Orig. art. has: 4 figures, 1 table.

SUB CODE: 21¹⁰/SUBM DATE: None/ ~~ORIG DATE: 001~~/ OTH REF: ~~002~~ 003

Card 3/3

CHEKALIN, I.A.

Comparative evaluation of various methods of streptomycin therapy
of tuberculous meningitis in children. *Pediatrics* no.2:69-72
Mr-Apr '54. (MLA 7:6)

1. Iz detskoy kliniki (zav. dotsent M.Ye.Savrik) Astrakhanskogo
meditsinskogo instituta (dir. dotsent S.V.Zakharov) na base go-
rodskoy somaticheskoy detskoy bol'nitsy (glavnyy vrach Z.H.
Yanichevskaya)

(TUBERCULOSIS, MENINGEAL, in infant and child,

*ther., streptomycin, evaluation of various methods)

(STREPTOMICIN, therapeutic use,

*tuberc., meningeal, in child., evaluation of various
methods)

CHEKALIN, I. Ya.

"Useful Function of Starlings in Nurseries," Les i step', No. 4, 1952.

1. CHEKALIN, I. Ya.
2. USSR (600)
4. Seedlings
7. Our experience with deep planting of seedlings. Les. khos. 5, No. 10, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. CHEKALIN, I. YA.
 2. USSR (600)
 4. Spindle Tree
 7. Experiment in growing warted spindle trees, Les. khoz., 5, No. 12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

1. CHERALIN, I. Ya.
2. USSR (600)
4. Sowing
7. Nursery planting of seeds in hexachloran treated soil, Les i step', 14, No. 11, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. CHEKALIN, K. M.
2. USSR (600)
4. Fisheries - Accounting
7. Struggle for lower production cost. Ryb. khoz. 28, no. 10, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January, 1953, Unclassified.

CHEKALIN, L.M.

Method of interpreting the materials of gas logging. Prikl.
geofiz. no.28:155-165 '60. (MIRA 14:3)
(Saratov Province--Oil well logging)

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1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

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PROCESSES AND PROPERTIES INDEX

Dyes from α -naphthylamine-5-sulfonic acid. S. F. Filippukhiev and M. A. Cherkalin. *Azidinostrachinens Proiz.* 2, No. 12, 15-15(1932). -New substantive azo dyes have been prep'd. from α -naphthylamine-5-sulfonic acid (I). Dinaphthyl-J acid (II) couples in alk. soln. with diazo-sulfonazaphthalene [from I and α -C₆H₄(NH₂)₂] to Anil Fast Blue 2N, giving bright blue shades on cotton, similar to Benzo Fast Blue BN (Hy), but somewhat less resistant to light and ironing; a blue-black dye is obtained by replacing II by the urea of J acid. A violet dye is obtained from I, "eresidine," and phenyl-J acid, which resembles Diamine Fast Violet BBN. On coupling I and of the urea of I acid with I and of I and of α -C₆H₄(NH₂)₂, a red dye, somewhat bluer than Benzo Fast Scarlet (III) (Hy), is obtained, while with NH₂Ph in place of α -C₆H₄(NH₂)₂, a yellow dye is produced closely resembling Benzo Fast Scarlet 4HS. m -C₆H₄(NH₂)₂, I, and α -C₆H₄(NH₂)₂ give a brown dye related to Benzo Brown BR, which contains naphthionic acid in place of I. By treating the monazo dye from I and Cleve's acid with COCl₂, a yellow-brown dye is produced; the monazo dye from I and naphthionic acid similarly yields a reddish orange dye. I, H acid and the urea of J acid give a yellowish green dye, and a yellower dye results from I, H acid and J acid.

H. C. A.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
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Study of the chemical process of production of Aniline Black E. S. P. Filippovskiy and M. A. Cherkas. Anilindyes, <i>Proizv.</i> 6, 413-21; 476-87 (1934). The results of a lab. study of the various phases of com. production and application of the dye are described. Chas. Blanc																			
ASD-55A METALLURGICAL LITERATURE CLASSIFICATION																			
3RD ORDER										4TH ORDER									
5TH ORDER										6TH ORDER									

1ST AND 2ND ORDERS										PROCESSES AND PROPERTIES INDEX										1ST AND 2ND ORDERS									
Substitution of diazo compounds in azo dyes. S. N. Filippichiev and M. A. Chubalov. <i>Doklady Akad. Nauk SSSR</i>, 1935, 27, 427. The reaction of displacement of 1 diazo compd. by another, in the synthesis of Toluidine Fast Brown 2 B, was investigated. Phenylazo-H acid in 3% Na₂CO₃ soln. mixed with an eq. amt. of ClN₂C₆H₄Cl (I) at 0° segd. PhN₂OH sol gave diazodiphenylazo-H acid. A systematic study of this reaction was carried out with 9 H₂O-sol. dye prepds. by coupling 1,5-HOC₆H₃(SO₃H) with the diazo compds. of PhNH₂, m-xylydine, p-aminosalicylic acid, p-ONC₆H₄NH₂, m-C₆H₄NH₂, sulfanilic acid, 2,4,6-H₃C₃(SO₃H)₃, benzidine and bisaniline. Each dye was treated with the diazo compds. of the same amines in Na₂CO₃ or NaOAc soln. The calculated results show that the ability of a diazo compd. of displacing a less active diazo compd. in a dye is directly related to its activity in forming azo compds. Thus, in all cases p-ONC₆H₄N₂Cl displaced p-HO₂SC₆H₄N₂ and I displaced PhN₂Cl. No displacement of p-ONC₆H₄N₂ by p-HO₂SC₆H₄N₂Cl was observed. Thus, the diazo compds. with neg. groups (NO₂, 2nd N₂Cl) in the p-position are the most active, followed in their activity by the sulfonic acids of diazo compds., m-C₆H₄N₂Cl, and diazo compds. of PhNH₂ and m-xylydine. p-Diazosalicylic acid, as expected, failed to displace any other diazo compds. In respect to the influence of the acidity of the medium, the results showed that a medium most favorable in the coupling of an acting diazonium is best suited for the substitution reaction. Thus, for I, m-C₆H₄N₂Cl and PhN₂Cl is required a Na₂CO₃ medium and for p-ONC₆H₄N₂Cl a NaOAc medium. None of the above diazonium compds. reacted with the dyes in a mineral-acid medium, but 1,2,4-ClN₂C₆H₃(NO₂)₃, which couples well in mineral acids, reacted in 5% H₂SO₄ with the PhN₂ deriv. of 1,5-HOC₆H₃(SO₃H)₂, segd. PhN₂H₂SO₃ and giving m-(ON₂)₂C₆H₃N₂-1,5-(HO)C₆H₃SO₃H. The reaction was further studied with various azo dyes. Like the o-hydroxyazo and o-aminoazo compds. previously studied, the corresponding p-derivs. undergo a similar reaction of interchange with diazoniums, giving the substitution products. If their structure permits a condensation with a diazonium, then this precedes the reaction of displacement. Thus, p-hydroxyazo compds. often give at first diazo dyes, e. g., the p-HOC₆H₄N₂ deriv. of o-C₆H₄OH + I → HO₂SC₆H₄N₂(HO)C₆H₄N₂C₆H₄C₆H₄N₂OH. The 2nd mol. of the diazonium is then capable of displacing the diazo-benzene-sulfonic acid with the formation of HON₂C₆H₄C₆H₄N₂(HO)C₆H₄N₂C₆H₄C₆H₄N₂OH. Similarly with the aminoazo dyes, the diazonium often was substituted in the amino group with the formation diazoaminoazo compds., followed by replacement of the diazo product in the dye. Similar to the ability of the diazo compds. of PhNH₂ and																													
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1ST AND 2ND COPIES		10	
The reaction of azo dyes with nitrous acid. I. I. M. Kogan and M. A. Cherkashin. <i>J. Applied Chem. (U. S. S. R.)</i> 11, 456-64 (in French 404) (1938).--Helianthin (28.1 g.), in 4 l. of water treated with a mixt. of 200 cc. of concd. HCl and NaNO₂ soln. (200 g. in 600 cc. of water) at 20° for an hr., yielded yellow crystals of Me₂NC₆H₄NO₂, m. 162-3°. After sepn. of these crystals, the soln. was satd. with 1 kg. of NaCl, causing pptn. of nitrohelianthin. The mother liquor was treated with 15 g. β-naphthol in 200 cc. of water and 4 g. of NaOH at 0°, yielding the Orange II dye; therefore, the mother liquor contained some of O.O.S.C₆H₄N₂N. Thus, the above			
reaction proceeded in 2 directions: (1) splitting of the azo compd. into the initial diazo compd. and nitro deriv. of the azo component (Me₂NPh) (66%); and (2) nitration of the azo dyes (36%). Thirty-one references. II. <i>Ibid.</i> 465-70 (in French 470).--p-NaO₂SC₆H₄N₂NC₆H₄NH₂ (30 g.) in 200 cc. of water contg. 4 g. of NaOH was treated with 7 g. of NaNO₂ in 30 cc. of water at 10°. No compds. similar to those obtained in treating helianthin were formed. p-HO₂SC₆H₄N₂NC₆H₄NH₂ (32.9 g.) was dissolved in 200 cc. of warm water contg. 4 g. NaOH; after adding 50 g. of NaCl and 7 g. NaNO₂, 30 cc. of HCl were rapidly added at 10°, yielding a ppt. of O.O.S.C₆H₄N₂NC₆H₄NH₂. The filtrate was treated with an alk. soln. of β-naphthol, yielding the Orange II dye; therefore, the filtrate contained p-O.O.S.C₆H₄N₂N. The presence of 1,4-O₂NC₆H₄N₂N was also observed in the products of the reaction, but no NO₂ deriv. of the azo compd. was identified. Nine references. A. A. Podgorny			
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CHEKALIN, M. A.

The manufacture of azo dyes; textbook for technical schools. Izd. 2., perer. i dop.
Moskva, Gos. nauchnotekhn. izd-vo khim. lit-ry, 1952. 447 p. (55-43142)

TF914.C5 1952

CHEKALIN, M.

CHEKALIN, M., JEREMIN, A.

"Organization of the Work and the Stakhanovite Movement in Production of Azo Dyes,"
p. 167.

(Chemicky Prumysl, Vol.3, No.5, May 1953, Praha.)

SO: Monthly List of ^{East European} ~~Monthly~~ ^{Vol.2, No.9} Accessions, Library of Congress, September 1953, Uncl.

CHERKALIN, Mikhail Aleksandrovich; CHERKASSKIY, A.A., redaktor; LUR'YE, M.S.,
tekhnicheskii redaktor

[Chemistry and technology of organic dyes] Khimiia i tekhnologiya
organicheskikh krasitelei. Moskva, Gos. nauchno-tekhn. izd-vo
khim. lit-ry, 1956. 575 p. (MLRA 10:2)
(Dyes and dyeing--Chemistry)

Ch eka lin, M. A.

BOGOSLOVSKIY, Boris Mikhaylovich; LAPTEV, Nikolay Grigor'yevich;
BORODKIN, V.F., red.; MORYGANOV, P.V., red.;
CHEKALIN, M.A., red.; VARSHAVSKAYA, L.S., red.; KOGAN, V.V.,
tekhn.red.

[The chemistry of dyes] Khimiia krasitelei. Moskva, Gos.nauchno-
tekhn.izd-vo lit-ry po legkoi promyshl., 1957. 433 p. (MIRA 11:1)
(Dyes and dyeing--Chemistry)

BOGOSLOVSKIY, Boris Mikhaylovich [deceased]; LAPTEV, Nikolay Grigor'yevich;
CHUKALIN, M.A., retsenzent; VERBITSKAYA, Ye.M., red.; KHAMKIN, M.F.,
tekhn.red.

[Chemistry of dyes] Khimiia krasitelei. Moskva, Izd-vo nauchno-
tekhn.lit-ry ~~SSSR~~, 1960. 279 p. (MIRA 14:1)
(Dyes and dyeing)

BOGOSLOVSKIY, B.M. (deceased); VIRNIK, A.D., inzh.; CHEKALIN, M.A., kand.
khimicheskikh nauk

Investigating the reaction of reactive dyes with α -amino acids.
Izv.vys.ucheb.zav.; tekhnolog.prom. no.4:80-87 '60. (MIRA 13:10)

1. Moskovskiy tekstil'nyy institut. Rekomendovana kafedroy
organicheskoy khimii i khimii krasiteley.
(Dyes and dyeing--Chemistry) (Amino acids)

VIRNIK, A.D.; CHEKALIN, M.A.

Intermittent dyeing of silk with dichlorotriazene dyes. Tekst.
prom. 20 no.9:45-46 S '60. (MIRA 13:10)
(Dyes and dyeing—Silk) (Triazene)

VIRNIK, A.D.; CHEKALIN, M.A.

Investigating the dyeing of protein fibers with reactive dyes. Report No.1.
Izv.vys.ucheb.sov.; tekhn.tekst.prom. no.6:109-115 '60.
(MIRA 14:1)

1. Moskovskiy tekstil'nyy institut.
(Dyes and dyeing)

CHEKALIN, Mikhail Aleksandrovich; FAYNBOYM, I.B., red.; SAVCHENKO, Ye.V.,
tekhn. red.

[Recent developments in the chemistry of dyes] Novoe v khimii krasitelei. Moskva, Izd-vo "Znanie," 1961. 23 p. (Vsesoiuznoe obshchestvo po rasprostraneniю politicheskikh i nauchnykh znanii. Ser.9, Fizika i khimiia, no.18) (MIRA 14:11)
(Dyes and dyeing)

KHARKHAROV, Aleksandr Aleksandrovich; KALONTAROV, Iosif Yakubovich;
MARKUZE, K.M., retsenzent; CHEKALIN, M.A., retsenzent;
VERBITSKAYA, Ye.M., red.; BATYREVA, G.G., tekhn. red.

[Reactive dyes and their use in the textile industry] Aktivny
krasiteli i ikh primeneniye v tekstil'noi promyshlennosti. Mo-
skva, Rostekhzdat, 1961. 131 p. (MIRA 15:7)
(Dyes and dyeing) (Textile chemistry)

VIRNIK, A.D.; CHEKALIN, M.A.

Interaction of reactive dyes with α -amino acids and silk.
Zhur. VKHO 6 no.2:236-237 '61. (MIRA 14:3)

1. Moskovskiy tekstil'nyy institut i Nauchno-issledovatel'skiy
institut poluproduktov i krasiteley imeni K. Ye. Voroshilova.
(Dyes and dyeing—Silk) (Amino acids)

CHEKALIN, M.A., kand.tekhn.nauk

Interaction of active dyes with cellulose. Tekst.prom. 21 no.1:40-43
Ja '61. (MIRA 14:3)

(Dyes and dyeing—Cellulose)

CHEKALIN, M.A., kand.khimicheskikh nauk

Dyes forming covalent bonds with fibers ("active dyes"). Tekst.
prom. 21 no.7:49-55 J1 '61. (MIRA 14:8)
(Dyes and dyeing--Textile fibers)

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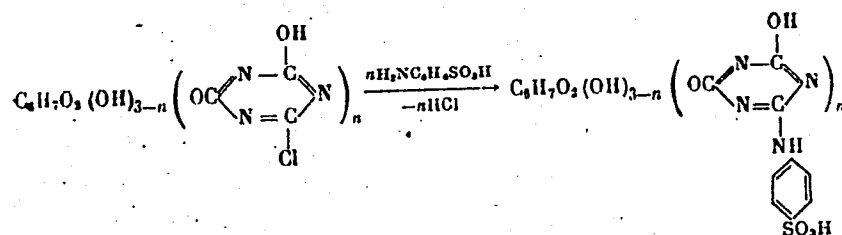
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S/190/62/004/003/013/023
B110/B144

AUTHORS: Gal'braykh, L. S., Derevitskaya, V. A., Rogovin, Z. A.,
Chekalin, M. A.

TITLE: Synthesis of new derivatives of cellulose and other
polysaccharides. XVIII. Synthesis of sulfo derivatives of
cyanuric cellulose

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 3, 1962, 409-413

TEXT: Sulfo cationites were produced from cyanuric cellulose (A):



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Synthesis of new derivatives...

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The substitution degree of A calculated from the N content is 10-50 % higher than that calculated from the Cl content. Cl atoms not reacting with cellulose are assumed to be partially saponified by treating alkali cellulose with cyanuric chloride solution. In this process, chemical bonds may form among cellulose macromolecules. The physical structure of cellulose has a great effect upon the substitution degree which becomes 2.5-3.5 times as high by the use of sulfite cellulose instead of cotton fabric. For 60-72 hrs A was treated with aqueous solutions of Na salts of sulfanilic or metanilic acids (3 moles acid per structural unit of A) with the module 1:20. CH_3COONa addition increased the pH value to 4.0-4.5. ✓

The sulfur content of the sulfo derivative of A was determined gravimetrically, its ion exchangeability by potentiometric titration in the presence of NaCl. Maximum S substitution at $\eta = 33$ corresponded to 1.23 meq/g. 65-80 % of Cl atoms enter into A. The Cl content in the sulfo derivative, however, is $\leq 0.1-0.2$ % which suggests additional hydrolysis. The curves of potentiometric titration of sulfo cationites have two salient points corresponding to two types of acid groups in the macromolecule: at pH = 3.8-4.0, the SO_3H groups are completely neutralized, and at 7.8-8.1, the OH group formed by Cl hydrolysis is neutralized. Derivatives

Card 2/3

Synthesis of new derivatives...

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of A can also be produced by treating cellulose with aqueous solutions of 2-chloro-4,6-di(4'-sulfophenyl amino)-triazine-1,3,5 and 2,4-dichloro-6-(4'-sulfophenyl amino)-triazine-1,3,5. Owing to its low substitution degree this method is not suited for the synthesis of sulfo cationites. The low degree of cationite swelling owing to chemical bonds among macromolecules, might recommend its application to ion exchange chromatography. There are 1 figure, 2 tables, and 9 references: 1 Soviet and 8 non-Soviet. The most important reference to the English-language publication reads as follows: J. Warren et al. Text. Res. J., 22, 584, 1952. X

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute)

SUBMITTED: March 2, 1961

Card 3/3

VIRNIK, A.D. , mladshiy nauchnyy sotrudnik; CHEKALIN, M.A., starshiy
nauchnyy sotrudnik, kand.khim.nauk

Reaction of active dyes with polyamide fibers. Tekst.prom.
21 no.12:47 D '61. (MIRA 15:2)

1. Moskovskiy tekstil'nyy institut (for Virnik). 2. Nauchno-
issledovatel'skiy institut organicheskikh poluproduktov i
krasiteley (for Chekalin).

(Dyes and dyeing--Textile fibers)
(Polyamides)

VIRNIK, A.D.; CHEKALIN, M.A.

Interaction of "active" dyes with α -amino acids. Zhur.prikl.khim.
35 no.3:588-593 Mr '62. (MIRA 15:4)

1. Moskovskiy tekstil'nyy institut.
(Dyes and dyeing) (Amino acids)

KARPUKHIN, Petr Prokhorovich; KOROTENKO, Tamila Aleksandrovna,
inzh.; CHEKALIN, M.A., doktor khim. nauk, retsenzent;
KOROLEV, A.I., kand. khim. nauk, retsenzent; TSYBA, L.A.,
insh., red.izd-va; TERESHCHENKO, V.V., tekhn. red.

[Active dyes] Aktivnye krasiteli. Kiev, Gostekhzdat
USSR, 1963. 132 p. (MIRA 17:1)

1. Chlen-korrespondent AN Ukr.SSR (for Karpukhin).

CHEKALIN, M.A.; CHLENOVA, R.S.; KHAYKINA, K.M.

Structure of the reaction groups of active dyes. Khim. prom.
no.10:744-747 O '63. (MIRA 17:6)

CHEKALIN, M.A., starshiy nauchnyy sotrudnik, kand.khim.nauk

Reaction of active dyes with cellulose. Tekst.prom. 23 no.8:
67-72 Ag '63. (MIRA 16:9)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley.

(Dyes and dyeing—Chemistry)

CHEKALIN, M.A., kand. khim. nauk; ROMANOVA, M.G., kand. khim. nauk

Lightfastness of active dyes. Tekst. prom. 25 no.12:51-53 D '65.
(MIRA 19:1)

1. Sotrudniki Nauchno-issledovatel'skogo instituta organicheskikh
poluproduktov i krasiteley.

LEONOV, Anatoliy Pavlovich; CHEKALIN, N.A., red.

[Collection of problems in electrical engineering] Zadachnik po elektrotekhnike. Moskva, Energiia, 1965. 111 p.
(MIRA 18:2)

TSIGEL'MAN, Igor' Yefimovich; TUL'CHIN, Iosif Konstantinovich;
MIRER, G.V., inzh., retsenzent; KLYUYEV, S.A., inzh.,
retsenzent; CHEKALIN, N.A., red.

[Electric power distribution, electrical networks, and
lighting] Elektrosnabzhenie, elektricheskie seti i osve-
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(MIRA 18:8)

1. Glavnyy elektrik Upravleniya po proyektirovaniyu
zhilishchno-grazhdanskogo i kommunal'nogo stroitel'stva
goroda Moskvy (for Mirer). 2. Glavnyy spetsialist Gosu-
darstvennogo instituta po proyektirovaniyu elektrooboru-
dovaniya dlya tyazheloy promyshlennosti (for Klyuyev).

KRAVTSOV, N.V.; LAZUKIN, V.N.; CHEKALIN, N.V.

Observation of spin induction in electron paramagnetic resonance.
Dokl. AN SSSR 150 no.6:1267-1269 Je '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom L.A.Artsimovichem.
(Nuclear spin) (Paramagnetic resonance and relaxation)

KRAVTSOV, N.V.; LAZUKIN, V.N.; CHEKALIN, N.V.

Microwave spectroscopy with a high-frequency modulated magnetic field for investigations in a wide range of temperatures. Vest. Mosk. un. Ser. 3: Fiz., astron. 18 no.6:18-22 N-D '63. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut yadarnoy fiziki Moskovskogo gosudarstvennogo universiteta.

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EMT(d)/HDS AFSTC/ASD/APGC Pg-4/Pk-4/P1-4/Po-4/Pq-4

ACCESSION NR: AP3001588

S/0102/63/000/003/0003/0008

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AUTHOR: Chekalin, V. G. (Kiev)

TITLE: Use of dispersion analysis in selecting the most effective control response for synthesizing the control system

SOURCE: Avtomaty*ka, no. 3, 1963, 3-8

TOPIC TAGS: dispersion analysis, dispersion analysis for control

ABSTRACT: General principles of dispersion analysis -- a part of the statistics theory -- are set forth. A concrete example of bifactorial analysis demonstrates the possibility of using the dispersion analysis for selecting the most effective control response (corrective action) in complex automatic systems. The dispersion analysis permits selecting the most effective control responses with a definite veracity. Orig. art. has: 1 figure, 12 formulas, and 5 tables.

ASSOCIATION: none

SUBMITTED: 09Feb63

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 002

OTHER: 001

Card 1/1

KLESHCHEV, V.V. [Klieshchov, V.V.] (Kiyev); CHEKALIN, V.G. [Chekalin, V.H.]
(Kiyev)

Comparative estimation of the volumes of one-layer and multilayer
recognition systems. Avtomatyka 8 no.4:45-49 '63. (MIRA 16:10)

L 19463-65 EFT(d)/ENP(1) Po-l/Pq-l/Pg-l/Pk-l/Pl-l IJF(c)/AEDC(a)/SSD/ASD(a)-5/
ASD(b)/AFMDC/AFETR/RAEM(a)/AFTC(p)/AFTC(a)/RAEM(d)/ESD(c)/ESD(dp) BC
ACCESSION NR: AP4049186 S/0102/64/000/005/0022/0030

AUTHOR: Teplov, V. P. (Kiev): Chekalin, V. G. (Kiev) 1 B

TITLE: Investigation of a multivariable adaptive system controlled by one parameter and correcting another

SOURCE: Avtomatyka, no. 5, 1964, 22-30

TOPIC TAGS: automatic control, automatic control design, automatic control system, automatic control theory, adaptive control 9

ABSTRACT: The problems of an analytical and experimental investigation of a multivariable control system are discussed. The possibility of a self-adjustment of the loop gain with simultaneous programed correction of damping is demonstrated. A method for calculating the self-adjustment algorithm analytically is given; the possibility of transferring information about the dynamic state of the plant from a high-speed channel to an inertial channel is indicated. The

Card 1/2

L 19463-65

ACCESSION NR: AP4049186

problems of channel similitude are discussed, and fundamental conditions for transferring information between the channels are formulated. Three adaptive-control block diagrams are considered, and experimental verification of the theoretical findings is claimed. Orig. art. has: 6 figures and 10 formulas.

ASSOCIATION: none

SUBMITTED: 28Feb64

ENCL: 00

SUB CODE: IE

NO REF SOV: 006

OTHER: 000

Card 2/2

L 18036-63

ACCESSION NR: /P3000725

S/0258/63/003/002/0376/0380

45

AUTHOR: Chekalin, V. Ye. (Moscow)

TITLE: Cowper heater calculations

SOURCE: Inzhenernyy zhurnal, v. 3, no. 2, 1963, 376-380

TOPIC TAGS: heat transfer, unsteady heat flow, heat conduction

ABSTRACT: Heat balance equations have been developed that describe the energy transfer between incoming gas and the thin-walled Cowper heater (air blast furnace) under arbitrary, time-dependent heat input conditions. The analysis is extended to include a by-pass for the air flow. Solutions are obtained for given gas inlet conditions and fixed mixing temperature between the by-pass gas and Cowper gas. Time-temperature plots are obtained for steady gas flow conditions as well as for an arbitrary flow rate. Orig. art. has: 28 equations and 4 figures.

ASSOCIATION: none

SUBMITTED: 27Feb62

SUB CODE: AI

Card 1/1

DATE ACQ: 21Jun63

NO REF SOV: 002

ENCL: 00

OTHER: 000

"
KHOLIN, V., inzh. CHEKALIN, N., inzh. (g. Kazan')

Cleaning machine for small diameter pipes with drive from pipe
layer. Stroi. truboprov. 3 no.8:29-30 Ag '58. (MIRA 11:11)
(Pipelines) (Cleaning machinery)

CHEKALIN, N.M.

Susceptibility to common corn smut of hybrid corn and their parent
self-pollinated lines and varieties. Sbor. trud. asp. i mol. nauch.
sotr. VIR no.5:263-266 '64. (MIRA 18:3)

CHEKALIN, Nikolay Petrovich; PAYBISOVICH, I.I., otvetstvennyy redaktor;
PRIZOROVSKIY, V.L., tekhnicheskiy redaktor; NADNINSKAYA, A.A.,
tekhnicheskiy redaktor

[LNEP-1 winch for work with cutting machines on slopes and steep
grades] Lebedka LNEP-1 dlia raboty vyemochnykh mashin na naklennom
i krytom padenii. Moskva, Ugletekhizdat, 1956. 25 p. (MLRA 9:7)
(Winches) (Coal mining machinery)

L 10764-63 EPF(c)/EWT(1)/BDS/
EEC(b)-2--AFFTC/ASD/ESD-3--Pr-4--GG
ACCESSION NR: AP3003222

S/0020/63/150/006/1267/1269

AUTHOR: Kravtsov, N. V.; Lazukin, V. N.; Chekalin, N. V.

TITLE: Observation of spin induction in electron paramagnetic resonance

SOURCE: AN SSSR. Doklady, v. 150, no. 6, 1963, 1267-1269

TOPIC TAGS: electron paramagnetic resonance, spin induction method

ABSTRACT: The nuclear induction method developed by F. Bloch *et al.* [Phys. Rev., 69, 127, (1946)] for observation of nuclear magnetic resonance has been applied to observation of electron paramagnetic resonance. The method consists of placing the sample in a constant magnetic field perpendicular to a variable magnetic field and observing the variable component of the electron spin magnetic moment through an emf induced in the direction perpendicular to the two crossed fields. Experiments were conducted with a setup employing a klystron oscillating at 9500 Mc and feeding a hybrid ring through a ferrite valve and variable attenuator. Part of the power passes into a bimodal cylindrical cavity positioned in the field of a 50-cps electromagnet. Input and output waveguides are perpendicular to one another. The sample is placed at the

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L 10764-63

ACCESSION NR: AP3003222

end of the cavity, where the microwave power is at a maximum, and the hybrid ring permits observation of the EPR signal by the usual method of reflection from the cavity. The system was tested with diphenylpicrylhydrazyl and yttrium ferrite single crystals. The results indicate high sensitivity of the device and high stability of the microwave circuit balance as particular advantages. It is suggested that observation of EPR by spin inductance can be accomplished in a radio spectroscopy with superheterodyne detection. The use of such a spectroscopy would obviate the necessity of using a hybrid ring or circulator, permit the use of high-power microwaves (which increases sensitivity), and provide very stable operation. Pulsed methods can also be used to observe electron spin induction and make relaxation time measurements. The article was presented by Academician L. A. Artsimovich, 29 January 1963. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University)

SUBMITTED: 16Jan63

DATE ACQ: 24Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 002

Card

2/2

CHEKALIN, P.M.

CA

29

Preparation of glue from fish wastes. P. M. Chekalin.
Russkoe Khim. 27, No. 3, 24(1951).—The middle layer of the
waste products of fish packing is treated with 2-3% naph-
thalenesulfonic acids, the ppt. is washed with water at 60-
70°, and the molten glue is shaped and cooled. After 10-
15 days of storage some water seps. may be observed.
The glue is insol. in cold water but is sol. in dil. NaHCO_3 or
 Na_2CO_3 and in 3-4% lime water. It is best used in aq.
soln. heated to 60-70°. (G. M. Kinslayoff)

CHEKALIN, S.I.; SHEVCHENKO, A.I.

Preliminary results of testing the VIR-2000 boring unit in
the Donets Basin. Razved. i okh. nedr 27 no.5:46-47 My '61.
(MIRA 14:9)

1. Trest "Artemgeologiya."
(Donets Basin--Boring machinery)

NR: AT6031849

WW/GD

AUTHOR: Chekalin, V. V.

ORG: none

SOURCE CODE: UR/0000/66/000/000/0077/0101

57
B+1

TITLE: A difference method for calculating the nonstationary heating of structures

SOURCE: Metody raschetov temperaturnykh poley i teploizolyatsii letatel'nykh apparatov (Methods for the calculation of temperature fields and heat insulation of aircraft): sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1966, 77-101

TOPIC TAGS: heat conduction, temperature field calculation, finite difference scheme, numerical solution, **DIFFERENCE METHOD, AIRCRAFT**

ABSTRACT: This article deals with the application of finite difference methods to the solution of heat conduction problems in various elements of high-speed flight vehicles. The problem of partitioning the structure into elements (elementary volumes) which depend on the thermophysical properties of materials, the geometrical shape of the structure, and the boundary conditions is analyzed and a unified calculation model is presented. The general, many dimensional finite-difference form of heat conduction equations satisfying the requirements of many practical problems is proposed and written in the form of three different difference schemes. The problems of the convergence and stability of these schemes are analyzed and approximation errors are established. Peculiarities of all three difference schemes with respect to

Card 1/2

UDC: 620.11

265200

40034

S/258/62/002/002/012/018

1028/1228

AUTHOR: Repik, Ye. U. and Chekalin, V. Ye. (Moscow)
TITLE: Convective heat exchange in supersonic conical nozzles
PERIODICAL: Inzhenernyy zhurnal, v. 2, no. 2, 1962, 359-364

TEXT: An approximate method is proposed for the calculation of the local values of the convective heat transfer coefficients from the gas side of the nozzle wall, and an experimental method devised for the checking of the results obtained. While the determination of these coefficients is necessary for the calculation of the nozzle cooling, the existing theoretical formulas are found to be unreliable; the experimental data, on the other hand, are scanty and concern only subsonic nozzles. The calculation method is based on splitting the wetted nozzle contour into a number of small sections in each of which the flow is assumed to be non-gradient, thus replacing the continuous variation of the flow parameters by a stepped one. A formula is given for the calculation of Re in every section, and the heat transfer coefficient determined at every point x as a function of the local values of Re and M . The experimental method is based on the direct measurement of the parameters of heat flux in the different sections. The nozzle is cooled by boiling water. At 24 different places along the nozzle are placed cases containing brass coils through which water flows. Vapors of the boiling water condense on the coil surface. The amount of heat transferred from the nozzle section is determined measuring the rate of flow of the water circulating through the coils and the temperature difference between the inflowing and

Card 1/2

Convective heat exchange on...

S/258/62/002/002/012/018

1028/1228

outflowing water, and the heat transfer coefficient is calculated from it. The theoretical results obtained are compared with the experimental ones, and the results found to be satisfactory. There are 8 figures.

SUBMITTED: November 27, 1961

Card 2/2

✓

43085

8/258/62/002/003/008/008
1006/1206

10.8200

AUTHOR: Chokalin, V.Ye. (Moscow)

TITLE: Heat transfer calculation of electrical heaters

PERIODICAL: Inzhenernyy zhurnal. v.2, no.3, 1962, 173-185

TEXT: Electrical heaters are considered, in which tubular electrical resistance heating elements are used, to allow fluid flow through them. The solution of the non steady problem of such heaters is given for arbitrary laws of supply of electrical energy along the element and with time, and of fluid flow rate. The solutions are used for the calculation of a multisectional and a single element heater used for wind tunnel air heating. Formulae are obtained for the lengths of sectional heating elements and for the power supply. The influence of preheat of resistance elements on time necessary for establishment of steady state is calculated. There are 10 figures.

SUBMITTED: February 1, 1962

Card 1/1

SVISTUNOV, G.A., inzh.; CHUKALIN, Yu.G.

Pneumatic wrench of a new type. Mont.i spets.rab.v stroi.
22 no.8:30 Ag '60. (MIRA 13:8)

1. Spetsial'noye konstruktorskoye byuro Mosstroya, i VZISI.
(Wrenches)

SVISTUNOV, G.A., inzh.; CHEKALIN, Yu.G., inzh.

Butt welding of reinforcement by means of friction. Stroi. i dor.
mashinostr. 5 no.8:33-34 Ag '60. (MIRA 13:8)
(Electric welding) (Reinforced concrete)

CHEKALIN, Yu.G., inzh.

Unit for drying cement. Mekh. stroi. 20 no.10:26 0 '63.
(MIRA 16:10)

CHEKALINA, S.I. (Krasnodar)

Can a single-stage Quick test be considered a satisfying indicator
of the functional state of the blood coagulation system? Lab.
delo no. 12:733-735 '64. (MIRA 18:1)

CHEKALINA, S.I.

Methodology of the functional study of blood coagulability and its
fibrinolytic activity. Lab. delo no.3:165-167 '65.

(MIRA 18:3)

1. Gosptal'naya terapevticheskaya klinika (zaveduyushchiy - dotsent
V.Ye. Bogdanov) Kubanskogo meditsinskogo instituta, Krasnodar. Nauch-
nyy rukovoditel' raboty - prof. I.A. Oyvin.

VAYNSHTEYN, Yu.I.; GINZBURG, K.Ya.; CHEKALINA, S.V.

Determination of bismuth, copper, and lead impurities in highly
volatile organosilicon compounds. Metod. anal. khim. reak. i prepar.
no.5/6:69-72 '63. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh
reaktivov i osobo chistykh khimicheskikh veshchestv.

CHEKALINA, T. A.

USSR.

✓Changes in hepatic function as the result of purulent pulmonary diseases. T. A. Chekalina, *Klin. Med.* (U.S.S.R.) 32, No. 6, 82-5 (1961). More than half of the observed patients had hypocholesterolemia, hypoproteinemias, and hyperglycemia. In many cases the hyperglycemia persisted after they had been discharged from the hospital. The detoxifying function of one half of the patients was impaired. Less pronounced were the impairments of the functions involving prothrombin and dyes.

A. Mirkin

EXCERPTA MEDICA Soc.3 Vol.12/5 Endocrinology April 58
Chekalina T.A.

703. CAROTINAEMIA IN DIABETES MELLITUS AS A SIGN OF INSUFFICIENCY OF LIVER FUNCTION (Russian text) - Chekalina T.A. Regional Clin. Hosp., Leningrad - PROBL.ENDOKR. 1956, 2/5 (81-86)

The relationship between insufficiency of liver function and carotinaemia was investigated in 40 patients with diabetes mellitus. The liver function was determined by the following tests: determination of the serum bilirubin, cholesterol, protein fractions and the Quick test. The majority of the patients studied had some degree of disturbance of liver function. Generally, this took the form of a disturbance of cholesterol and protein metabolism and also of the antitoxic function of the liver, and moreover, the degree of carotinaemia varied parallel with the severity of the diabetes and was apparently connected with the liver function insufficiency.

Dilman - Leningrad (S)

Leningrad oblast Bol'nitsy klinicheskoy

GAR, K.A.; CHEKALINA, V.I.

Investigation of the toxicity of chlorinated terpenes. [Trudy]
NIUIF no.164:40-41 '59. (MIRA 15:5)
(Terpenes) (Insecticides)

GAR, K.A.; GUSAKOVA, M.V.; CHEKALINA, V.I.

Investigation of the toxicity and phytocidal capacity of the
distillates of some chlorinated terpenes. [Trudy] NIUIF
no.171:74-80 '61. (MIRA 15:7)
(Chlorine organic compounds) (Insecticides--Toxicology)

VOLODKOVICH, S.D.; VOL'FSON, L.G.; CHEKALINA, V.I.; TREML', A.G.; FRENKEL',
A.M.

New nematocides - polyhalo derivatives of hydrocarbons and esters
of haloacetic acids. Khim.prom. no.9:648-650 S '62. (MIRA 15:11)
(Nematocides)

CHEKALINA, V.I.

Methods of the laboratory testing of preparations for nematocidal properties. Sbor. rab. po nemat. sel'khoz. rast. no. 5:134-140 '63. (MIRA 17:5)

1. Toksikologicheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh sredstv zashchity rasteniy, Moskva.

USSR/Cultivated Plants - Fodders.

M-4

Abs Jour : Ref Zhur- Biol., No 7, 1958, 29856

Author : Chekalinakaya, I.I.

Inst : Institute for Biology of the Academy of Sciences, Bielo-
russian SSR.

Title : The Accumulation of Chlorophyll, Carotene and Vitamin C
in Corn and Fodder Cabbage.

Orig Pub : V sb.: Kukuza v BSSR. Minsk, AN BSSR, 1957, 377-387

Abstract : In order to study the effects of dosages and ratios of
the basic nutrients on the accumulation of chlorophyll,
carotene and vitamin C experiments were set up in the
Institute for Biology of the Academy of Sciences Bielo-
russian SSR with water cultures (Belorussian corn and
Mozgovaya Zelenaya fodder cabbage). An increase in N
content in the feeding mixture

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USSR/Cultivated Plants - Fodders.

M-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29856

(from 0.25 to 0.75 grams of $\text{Ca}(\text{NO}_3)_2$ per 1 liter of solution) brought about augmented carotene and chlorophyll content in the corn leaves. Doses of N which exceeded 0.5 gm. $\text{Ca}(\text{NO}_3)_2$ noticeably reduced the vitamin C content in the green stuff of corn. K_2SO_4 acted on the accumulation of vitamins to a lesser degree than N. Raising the NaH_2PO_4 content above 0.5 gm. per 1 liter of sol. led to decreased chlorophyll and carotene content. The green stuff of corn and fodder cabbage which was grown under the field test conditions on peat bog and mineral soils were noted for their high chlorophyll, carotene and vitamin C content.

Card 2/2

IVANOVA, Ye.V.; CHEKALINSKAYA, I.I.

Sosnovskii's cow parsnip (*Heracleum Sosnovskyi* Manden) as a
prospective feed and silage plant in the White Russian S.S.R.
Sbor. nauch. rab. TSBS no.1:25-29 '60. (MIRA 14:10)
(White Russia—Cow parsnip)
(Ensilage)

CHEKALINSKAYA, I.I.; IVANOVA, Ye.V.

Some data on the biochemistry of *Polygonum Weyrichii* F. Schmidt.
Sbor. nauch. rab. TSBS no.2:144-148 '61. (MIRA 15:7)
(*Polygonum*)

IVANOVA, Ye.V.; CHEKALINSKAYA, I.I.; YAKIMOV, A.P.

Effect of azotobacterin and mineral fertilizers on the productivity
of *Polygonum coriarium*. Sbor. nauch. rab. TSBS no.2:149-153 '61.
(MIRA 15:7)

(*Polygonum*--Fertilizers and manures)

TERENT'YEVA, M.V. [TSiarents'eva, M.V.]; CHEKALINSKAYA, I.I. [Chakalinskaia, I.I.]

Content of some microelements in new forage plants. Vestsi AN
BSSR Ser. bial. nav. no.3:81-83 '64 (MIRA 18:1)

CHEKALINSKAYA, I.I.; KOZLYAK, L.V.

Some data on the biochemistry of *Polygonum coriarium*. Bot.; issl. Bel.
otd. VBO no.6:22-28 '64. (MIRA 18:7)

IVANOVA, Ye.V.; CHEKALINSKAYA, I.I.

Cultivation of Phaponticum carthamoide in White Russia.
Bot.; issl. Bel. otd. VBO no.6s28-32 '64.

(MIRA 18s7)

CHEKALINSKAYA, I.I. [Chakalinskaja, I.I.]; VOLOD'KO, T.V. [Valadz'ko, T.U.]

Vitamin accumulation dynamics in the tops of Polygonum Weyrichii
Fr. Schmidt. Vestsi AN BSSR. Ser. biol. nav. no. 1:65-68 '65.
(MIRA 18:5)

KAUROV, I.A.; CHEKALINSKAYA, I.I.; YAKIMOVSKAYA, L.F.

Polygonum weyrichii as a promising silage crop for White Russia.
Rast. res. 1 no.1:115-118 '65. (MIRA 18:6)

1. Institut eksperimental'noy botaniki i mikrobiologii AN BSSR
i TSentral'nyy botanicheskiy sad AN BSSR, Minsk.

POTAPOV, N.P.; CHEKALINA, Z.A.

Frequency Q-factor dependences of standard measures for testing
Q-meters. Izv. tekh. no. 11:42-43 N 163. (MIRA 16:12)

CHEKALINSKAYA, I. I.

CA

2

Kinetics of oxidation of the silver salt of abietic acid
M. M. Pavlyuchenko, I. I. Chekalinskaya, and V. M. Alukovich (Acad. Sci. U.S.S.R., Chern. Inst., Minsk). *Zhur. Fiz. Khim.* 25, 978-80 (1951).—The kinetics of oxidation of the silver salt of abietic acid is studied at 40, 50, 60, 70, 80, and 90°. The reaction is autocatalytic. The times (in hrs.) necessary for reaching 75% of the salt are, resp., 20, 4, 4.5, 3.15, 1.85 at 40, 50, 60, 70, 80°. At 100° and above, the salt decomposes as a result of the exothermicity of the process. The rate depends linearly on O₂ pressure between 200 and 400 mm., then becomes independent of O₂ pressure; this suggests O₂ adsorption. The latter is measured at 50, 60, 80, 90, and 90°; the quantities of O₂ chemisorbed are, resp. (cc. per 1 g. of salt): 0.405, 0.975, 1.885, 2.955, and 3.075; the temp. coeff. of adsorption suggests activated adsorption. Lefine tests show that O₂ attaches itself to only one double bond of the salt, and KI tests fail to detect peroxides in the oxidized product. This work is part of a systematic investigation of the topochem. oxidation of abietic acid and its salts (C.A. 30, 3190; C.A. 48, 8826f). Michel Boudart

CHEKALINSKAYA, L. I.

"Accumulation of Chlorophyll, Caroteno, and Vitamin C In Corn and Fodder Cabbage Under Various Conditions of Mineral Nutrition." Cand Biol Sci, Belorussian State U, Minsk, 1953. (RZhBiol, No 8, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

**NESTEROVICH, N.D., kandidat biologicheskikh nauk; CHEKALINSKAYA, N.I.,
nauchnyy sotrudnik.**

**Propagating introduced woody plants by green cuttings. Sber. nauch.
trud. Inst. biol. AN BSSR no. 3:83-103 '52. (MLA 9:2)
(Plant propagation)**

CHEKALINSKAYA, N.I.
NESTEROVICH, N.D.; CHEKALINSKAYA, N.I.

Cultivating the fire thorn in the White Russian S.S.R. Biul.Glav.bot.
sada no.21:99-101 '55. (MLRA 8:12)

1. Institut biologii Akademii nauk Belorusskoy SSR.
(White Russia--Plants, Ornamental) (White Russia--Evergreens)

NESTEROVICH, M.D., akademik; IVANOV, A.F.; IVANOVA, Ye.V.; KRASHNIK, A.I.;
LYUBENKOV, A.A.; PONOMAREVA, A.V.; SIROTEINA, R.G.; SMOL'SKAYA,
Ye.M.; TRUKHANOVSKIY, D.S.; CHEKALINSKAYA, M.I.; BULAT, O..
red.isd-va; VOLOKHANOVICH, I., tekhnred.

[Introduction of trees and shrubs into White Russia] Introdutsiro-
vannye derev'ia i kustarniki v Belorusskoi SSR. Minsk. No.1.

[Introduction of woody plants from the flora of the Far East and
countries of Eastern Asia] Introdutsirovannye drevesnye rasteniia
flory Dal'nego Vostoka i stran Vostochnoi Azii. 1959. 351 p.

(MIRA 12:6)

1. Akademiya nauk BSSR, Minsk. Instytut biyalogii. 2. Akademiya
nauk BSSR (for Nesterovich).

(White Russia--Trees)

NESTEROVICH, N.D., doktor biolog.nauk, akademik; IVANOV, A.P.; IVANOVA, Ye.V.; KRASNIK, A.I.; MUSIYAKINA, N.P.; PONOMAREVA, A.V.; SIROTKINA, SMOL'SKAYA, CHEKALINSKAYA, N.I.; BULAT, O., red.izd-va; SIDERKO, N., tekhn.red.

[Trees and shrubs introduced into the White Russian S.S.R.] Introdutsirovannye derev'ia i kustarniki v Belorusskoi SSR. Minsk. No.2. [Arboraceous plants introduced from the flora of North America] Introdutsirovannye drevesnye rasteniia flory Severnoi Ameriki. 1960. 296 p. (MIRA 13:6)

1. Akademiya nauk BSSR, Minsk. Institut biologii. 2. AN BSSR (for Nesterovich).

(White Russia--Plant introduction) (Trees) (Shrubs)